

System Schematics

Service Addendum

A1200



Commodore

 **Commodore**
AMIGA

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Technology Group
1200 Wilson Drive, West Chester, Pennsylvania 19380, USA.

JUMPERS AND STUFF

[illegible]

CONNECTORS

| REF | TYPE | DESCRIPTION | PAGE |
|------|---------|------------------------|------|
| CN1 | DB9P | MOUSE/JOYSTICK 1 | 5 |
| CN2 | DB9P | MOUSE/JOYSTICK 2 | 5 |
| CN3 | RCA-J | RIGHT AUDIO OUTPUT | 5 |
| CN4 | RCA-J | LEFT AUDIO OUTPUT | 5 |
| CN5 | DB25S | EXTERNAL FLOPPY | 8 |
| CN6 | DB25P | RS232 SERIAL PORT | 7 |
| CN7 | DB25S | PARALLEL PRINTER PORT | 7 |
| CN8 | 50 DIN | POWER SUPPLY CONNECTOR | 13 |
| CN9 | DB23P | VIDEO OUTPUT | 6 |
| CN10 | RCA-J | COMPOSITE VIDEO | 4 |
| CN11 | DIL-34 | INTERNAL FLOPPY SIGNAL | 8 |
| CN12 | SIL-4 | INTERNAL FLOPPY POWER | 8 |
| CN13 | MEM-30 | KEYBOARD MEMBRANE | 9 |
| CN14 | SIL-4 | INTERNAL FLOPPY POWER | 8 |
| CN13 | MEM-30 | KEYBOARD MEMBRANE | 9 |
| CN14 | SIL-4 | KEYBOARD STATUS LED'S | 9 |
| CN15 | PCMCIA | PC *MEMORY CARD* | 11 |
| P9 | EDGE-80 | MEMORY BUS EXPANSION | 12 |

REVISION HISTORY

[illegible]

SIGNAL GLOSSARY

| SIGNAL | DESCRIPTION (AREA) | PAGES |
|------------|--------------------------------------|-------|
| 28MHZ | 28.63636 MHZ MASTER CLOCK | |
| 7MHZ | 7.15909 MHZ PROCESSOR CLOCK | |
| A[23:1] | PROCESSOR ADDRESS BUS (68000) | |
| ACK | DATA ACKNOWLEDGE (PARALLEL PORT) | |
| AS | ADDRESS STROBE (68000) | |
| AUDIN | AUDIO INPUT (RS232 PORT) | |
| AUDOUT | AUDIO OUTPUT (RS232 JACK) | |
| BEER | BUS ERROR (68000) | |
| BG | BUS GRANT (68000) | |
| BGRACK | BUS GRANT ACKNOWLEDGE (68000) | |
| BLISS | BLITTER SLOWDOWN (CHIPS) | |
| BLIT | CHIP MEMORY ACCESS (CHIPS) | |
| BR | BUS REQUEST (68000) | |
| BUSY | DEVICE BUSY (PARALLEL PORT) | |
| CASL/U | COLUMN ADDRESS STROBE (DRAM) | |
| CCK/CCKO | COLOR CLOCK / QUADRATURE (CHIPS) | |
| CDAC | 7.15909 MHZ QUADRATURE CLOCK (CHIPS) | |
| CHNG | MEDIA CHANGE (FLOPPY) | |
| CLKRD/WR | READ-TIME CLOCK READ / WRITE (RTC) | |
| COMP | MONOCHROME COMPOSITE VIDEO (VIDEO) | |
| CSYNC | COMPOSITE SYNC (VIDEO) | |
| CTS | CLEAR TO SEND (RS232 PORT) | |
| D[15:0] | PROCESSOR DATA BUS (68000) | |
| DIR | STEP DIRECTION (FLOPPY) | |
| DKRD | DISK READ DATA (FLOPPY) | |
| DKWD | DISK WRITE DATA (FLOPPY) | |
| DKWE | DISK WRITE ENABLE (FLOPPY) | |
| DMPL | CHIP DMA REQUEST LINE (CHIPS) | |
| DRA[8:0] | DRAM ADDRESS BUS (DRAM) | |
| DRD[15:0] | DRAM DATA BUS (DRAM) | |
| DSR | DATA SET READY (RS232 PORT) | |
| DTACK | DATA TRANSFER ACKNOWLEDGE (68000) | |
| DTX | DATA TERMINAL READY (RS232 PORT) | |
| E | PERIPHERAL ENABLE CLOCK (68000) | |
| EXTICK | EXPANSION PRESENT / RTC TICK | |
| FC[2:0] | FUNCTION CODE (68000) | |
| FIREQ/I | FIRE BUTTON 0/I (JOYSTICKS) | |
| HIT | PROCESSOR HALT (68000) | |
| HSYNC | HORIZONTAL SYNC (VIDEO) | |
| INDEX | INDEX PULSE (FLOPPY) | |
| INT[2,3,6] | INTERRUPT REQUEST (CHIPS) | |
| IRESET | I/O RESET | |
| IPL[2:0] | INTERRUPT PRIORITY LEVEL (68000) | |
| KBCLOCK | KEYBOARD CLOCK (KEYBOARD) | |
| KBDATA | KEYBOARD DATA (KEYBOARD) | |
| KPRESET | KEYBOARD RESET (KEYBOARD) | |
| LDS/UDS | UPPER / LOWER DATA STROBES (68000) | |
| LED | POWER ON LED / AUDIO FILTER DISABLE | |
| LEFT/RIGHT | LEFT RIGHT AUDIO (AUDIO) | |

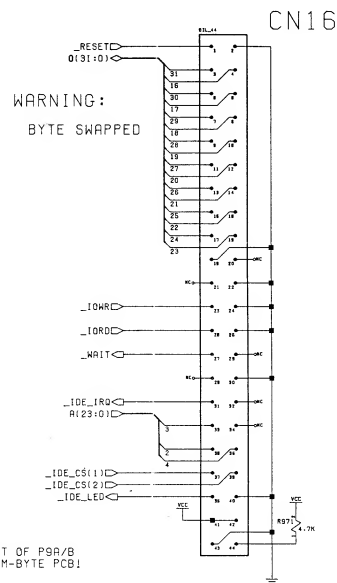
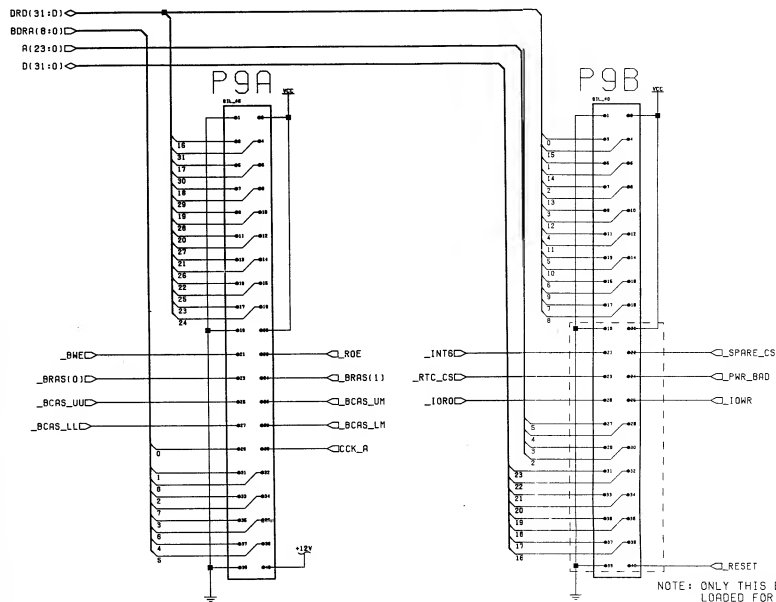
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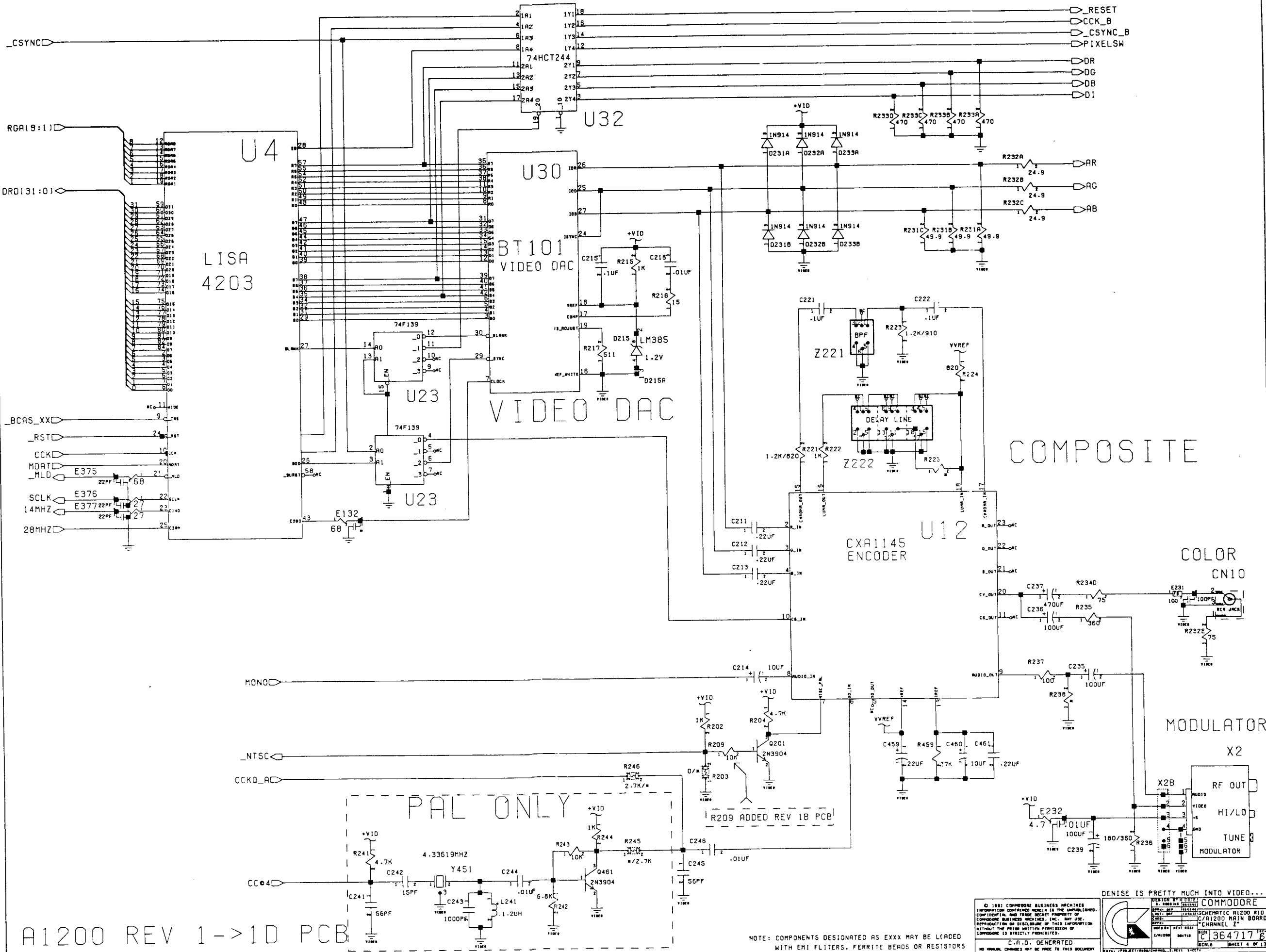
KEY COMPONENTS

| REF | CHIP | DESCRIPTION | PAGE |
|--------|---------|------------------------|--------|
| U1 | 68000 | 68000 PROCESSOR 16MHZ | 2 |
| U2 | 8374 | ALICE (AA AGNUS) | 2 |
| U3 | 8364 | PAULA | 5 |
| U4 | 4203 | LISA (AA DENISE) | 4 |
| U5 | F023A | AA GAYLE (CBM ASIC) | 2.8.11 |
| U5 | ASST | ROM 512KX16. 150 NS | 10 |
| U7 | 8520 | AMIGA VIA. 1 MHZ | 7 |
| U11 | 28F10 | FLASH MEMORY 128KX8 | 10 |
| U12 | CXA1145 | SONY VIDEO ENCODER | 4 |
| U13 | 68HC05 | AMIGA KEYBOARD MPU | 9 |
| U42 | PS1518 | LOW VOLTAGE SENSE IC | 9 |
| U12 | LF347 | BIMOS OP-AMP | 5 |
| | TL084 | BIMOS OP-AMP | ALT |
| U16-17 | ASST | DRAM 256KX16. 80NS | 3 |
| U18-19 | ASST | DRAM 256KX16 OPTIONAL3 | 3 |
| U25 | 391??? | BUDDIE (ASIC) | 2 |
| U28 | 1488 | EIA LINE DRIVER | 7 |
| U29 | 1489 | EIA LINE RECEIVER | 7 |
| U30 | BT101 | TRIPLE 8-BIT VIDEO DAC | 4 |
| X1 | OSC | TTL 28.63636 MHZ NTSC | 2 |
| | OSC | TTL 28.37512 MHZ PAL | ALT |
| Y451 | XTAL | 4.43619MHZ PAL BURST | 4 |
| Y421 | XTAL | 3MHZ CERAMIC RESONATOR | 9 |
| X2 | ASST | PAL VIDEO MODULATOR | 4 |
| | ASST | NTSC VIDEO MODULATOR | 4 |

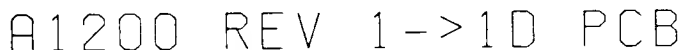
MEMORY EXPANSION

IDE DRIVE

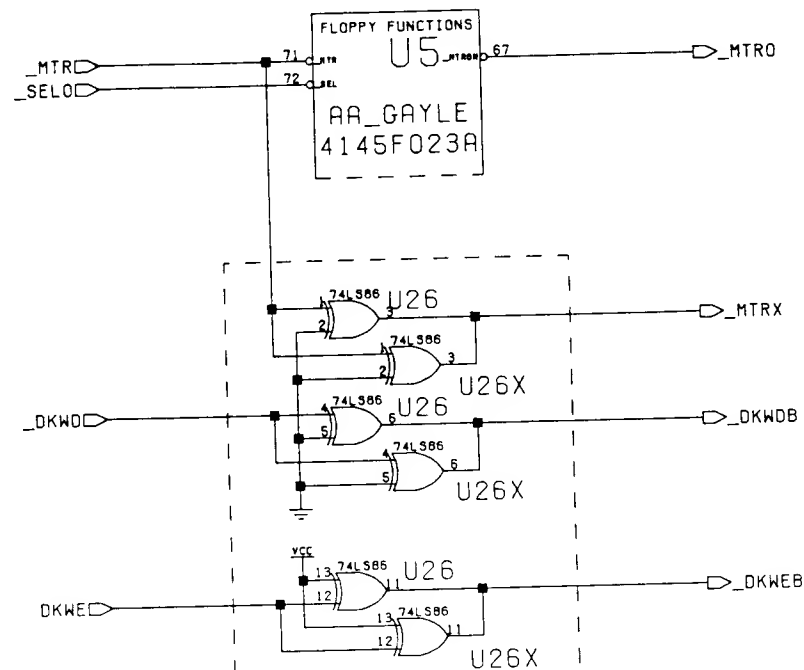




D(31:0) \diamond
 A(23:0) \diamond
 FC(2:0) \diamond

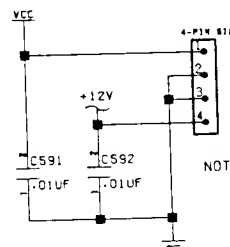


FLOPPY LOGIC



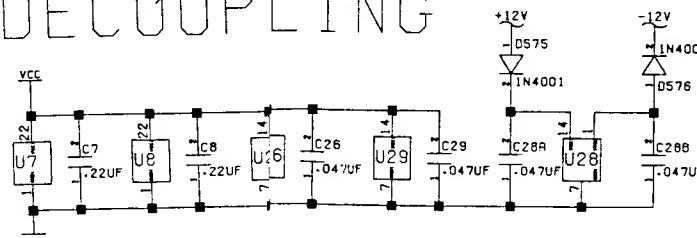
SEE OOPS ON PAGE 2...
U26 AND U26X MAY OVERLAP!

FLOPPY POWER

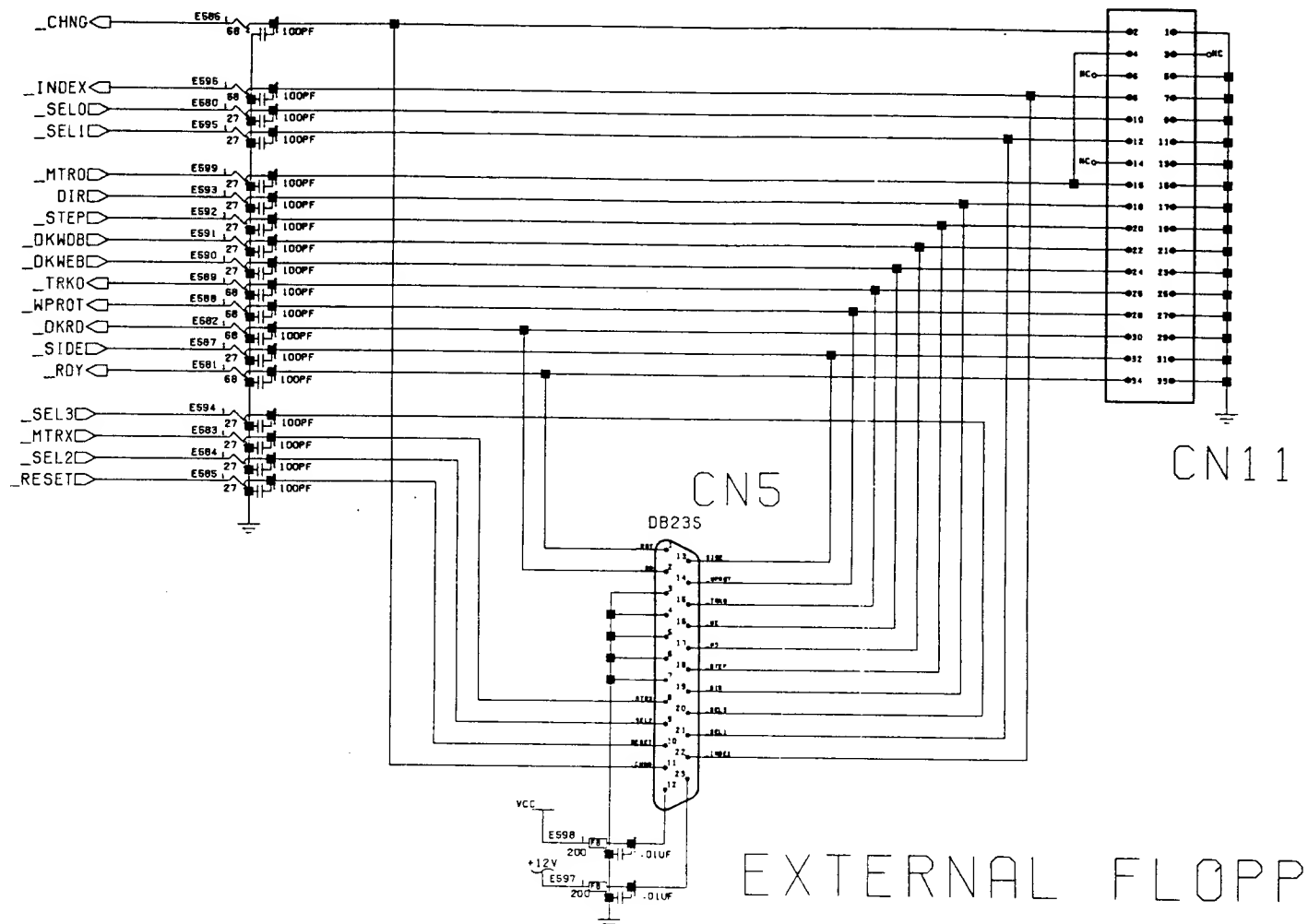


NOTE: SOME DRIVES ARE +5 ONLY...

DECOUPLING



INTERNAL FLOPPY



EXTERNAL FLOPPY


A1200 REV 1->1D PCB

CN15



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DECOUPLING

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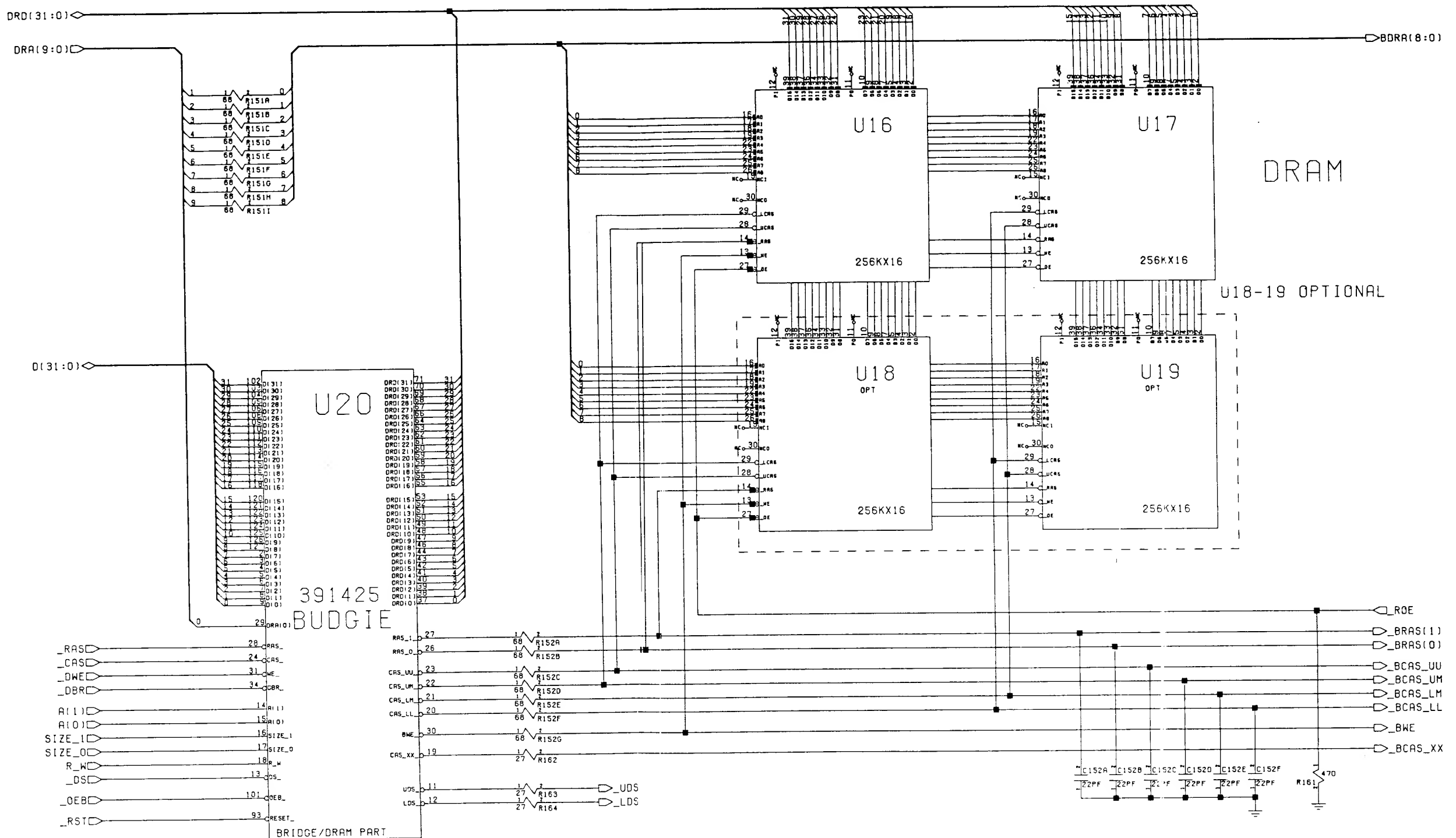
DECOUPLING

DECOUPLING

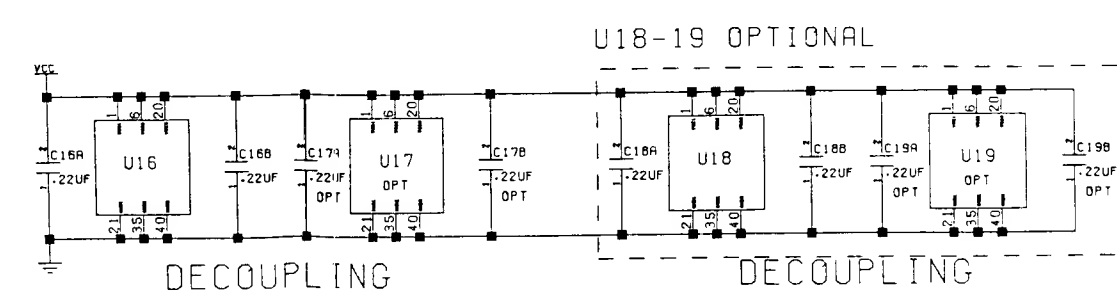
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REAL TIME POWER

A1200 REV 1->1D PCB



A1200 REV 1->1D PCB



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MEMORY AND...WELL, I USED TO REMEMBER

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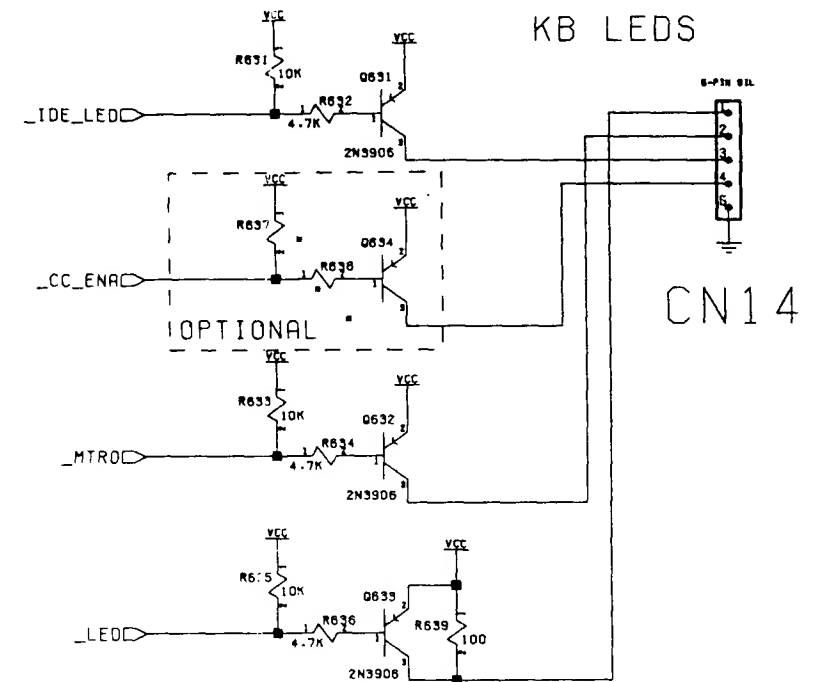
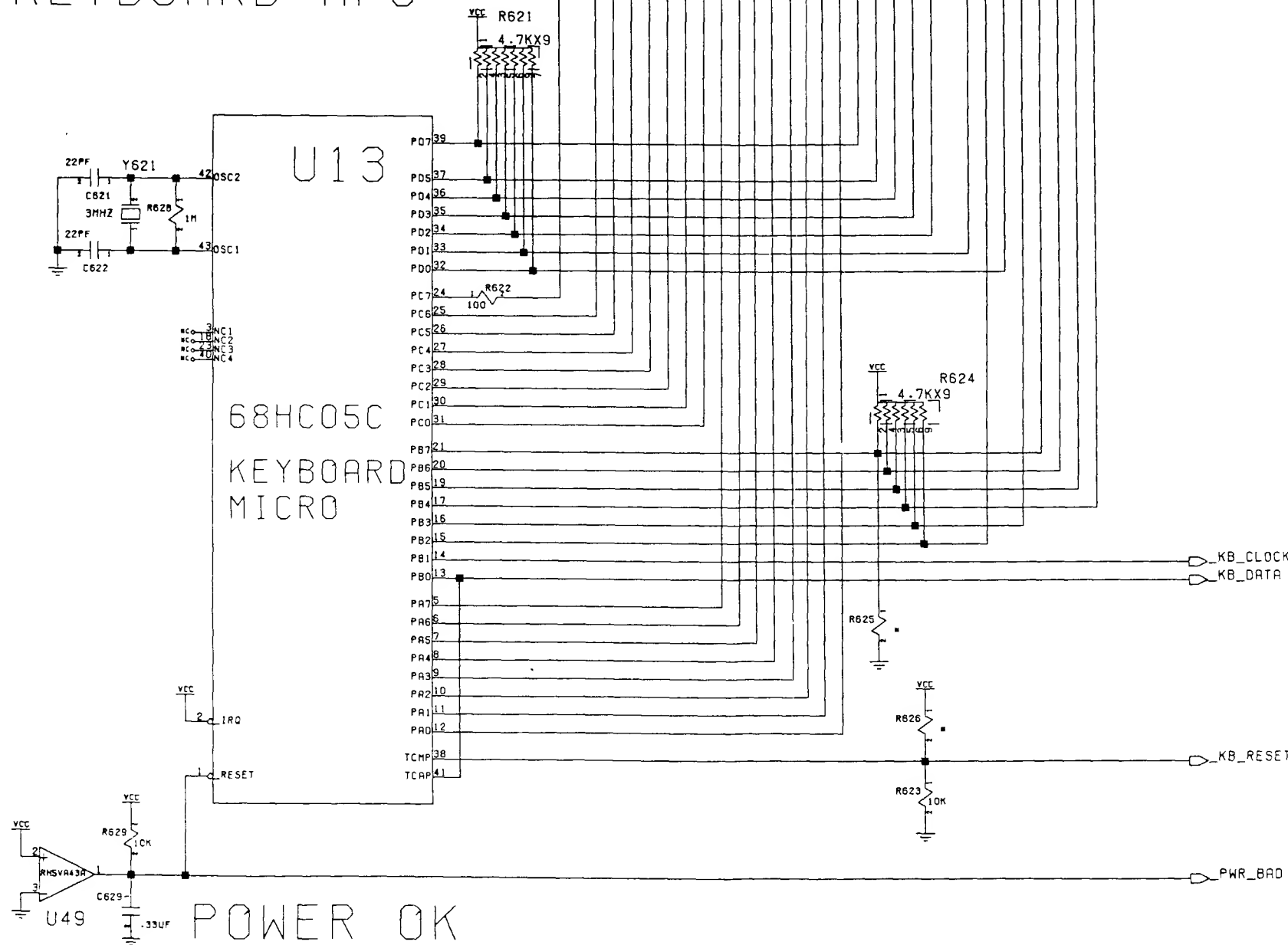
SCHEMATIC A1200 RID
C.A1200 MAIN BOARD
CHANNEL 1

364717

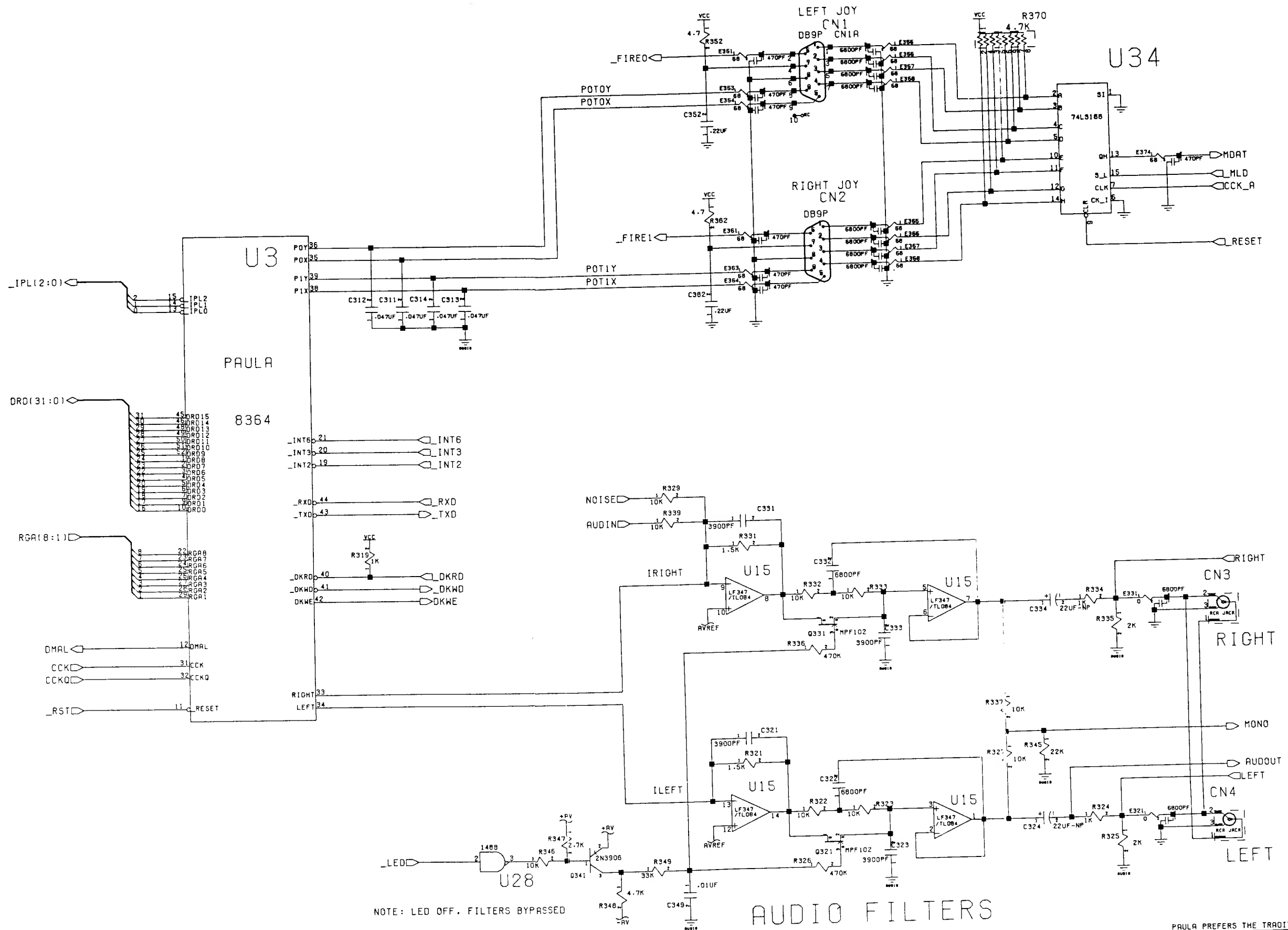
SCALE SHEET 3 OF 13

KEYBOARD TAIL CN13

KEYBOARD MPU

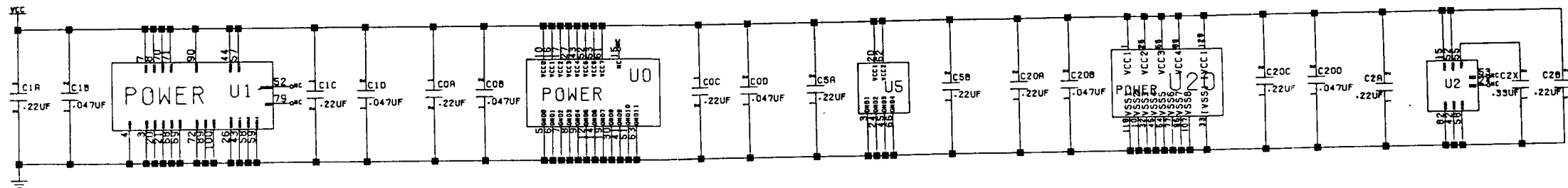


MOUSE/JOYSTICK PORTS

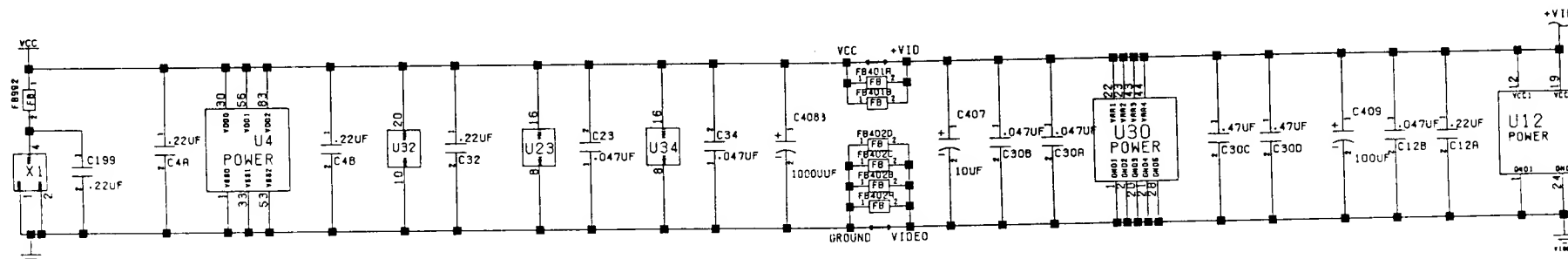


A1200 REV 1->1D PCB

GENERAL DECOUPLING

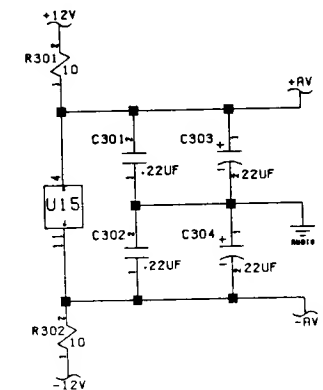


VIDEO DECOUPLING

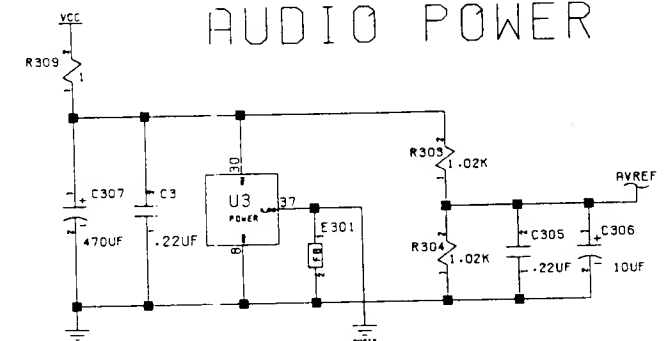


NOTE: AS OF REV 1C, LOGIC AND VIDEO GROUND AND POWER ARE THE SAME NET, BUT ROUTED DISCRETELY EXCEPT AT DAC1
ALSO ADDED C30C AND C30D FOR OVERKILL DAC DECOUPLING.

AUDIO DECOUPLING

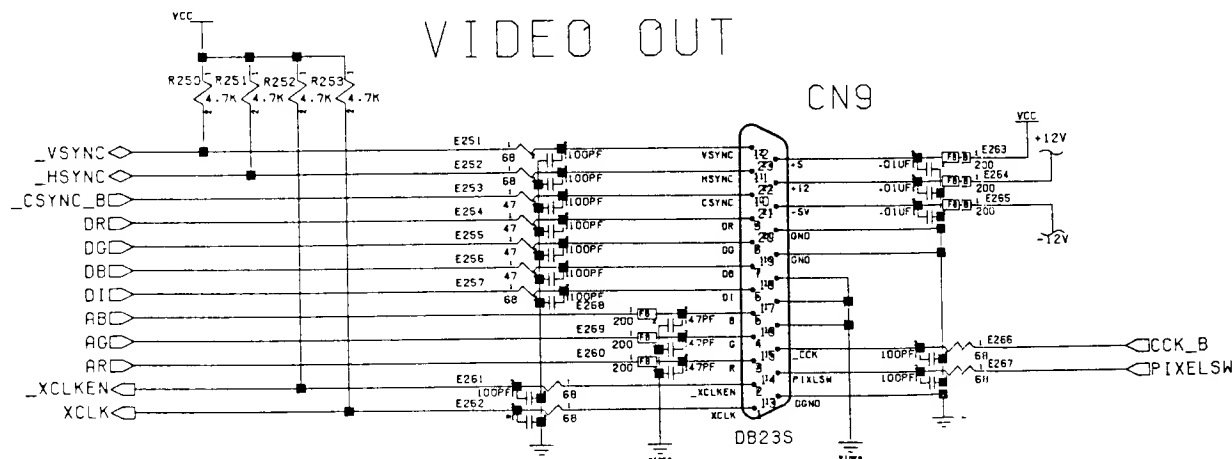


AUDIO POWER



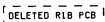
NOTE: GROUND INTERCONNECTION NEAR AUDIO JACKS.

VIDEO OUT



A1200 REV 1->1D PCB

A1200 REV 1->1D PCB



CN8



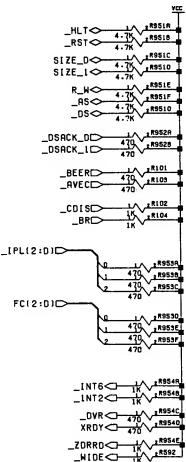
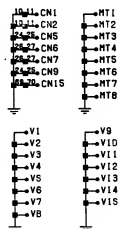
TEST ACCESS



TP2

TP3

TERMINATION



| | | | |
|--------|---|---|-------------|
| SYSTEM | 1 | 0 | CPU/CPULCK |
| | 0 | 0 | EC020/14MHZ |
| | 0 | 1 | 020/14MHZ |
| | 1 | 0 | 030/14MHZ |
| | 1 | 1 | 030/>14MHZ |

